

WHAT IS CLAIMED IS:

1. A laser device for medical treatment system, comprising at least a plurality of laser beam emitting sources, a laser beam multiplexing means for superimposing the laser beams emitted from said laser beam emitting sources, and a beam mixing means where the laser beams from said laser beam multiplexing means enter.

2. A laser device for medical treatment system according to claim 1, wherein said beam mixing means is an optical fiber.

3. A laser device for medical treatment system according to claim 1, wherein said beam mixing means is an optical waveguide.

4. A laser device for medical treatment system according to claim 1, wherein said plurality of laser beams have different wavelengths and wherein said beam multiplexer comprises an optical member which transmits the laser beams by selecting the wavelength and which reflects the laser beam with a wavelength other than transmission wavelength.

5. A laser device for medical treatment system according to claim 1, wherein said plurality of laser beams have different directions of polarization and wherein said beam multiplexing means has a polarizing plate.

6. A laser device for medical treatment system according to claim 1, wherein said plurality of laser beams is entered to said beam multiplexing means and wherein said beam multiplexing means comprises a condenser lens which has an optical axis in parallel to said plurality of laser beams.

7. A laser device for medical treatment system

according to claim 1, wherein said beam multiplexing means has a plurality of optical fibers where the laser beams enter individually, and said optical fibers have output ends integrated by being welded and deposited.

8. A laser device for medical treatment system according to claim 1, wherein there is provided a photodetector for detecting a reflection light at an incident end of said beam mixing means, and said photodetector controls emission of the laser beams from said laser beam emitting sources based on the result of detection.

9. A laser device for medical treatment system according to claim 1, wherein said device comprises said laser beam emitting sources, said laser beam multiplexing means, and said beam mixing means integrated with each other, and the device can be attached to or removed from a medical treatment system via an optical connector.